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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10-031,964	01/17/2002	Achim Kehl	70372	8629

7590 05/20/2003
McGlew & Tuttle
Scarborough Station
Scarborough, NY 10510-0827

EXAMINER
KERNS, KEVIN P

ART UNIT	PAPER NUMBER
1725	1

DATE MAILED: 05/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/031,964

Examiner

Kevin P. Kerns

Applicant(s)

KEHL, ACHIM

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2003.
- 2a) ☐ This action is FINAL.
- 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 1-4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-14 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____

- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group II (claims 5-14) in Paper No. 8 is acknowledged. The applicant's traversal is on the ground(s) that the device for forming the honeycomb structure is allegedly closely related to the resulting honeycomb structure. This is not found persuasive because the device and the resulting honeycomb structure contain no common technical feature, as the device includes the structural features of a comb-like finger system and a pressing-on device (see device Figures 2-8 and corresponding reference numbers 6-10), whereas the honeycomb structure (see Figure 1) contains a plurality of individual film webs 4, in addition to (unlabelled and unspecified) honeycomb structural features 1, 2, 3, and 5. As a result, there are no common technical features that are shared between the device (drawing structures 6-10) and the honeycomb structure (drawing structures 1-5), and no single general inventive concept exists.

The requirement is still deemed proper and is therefore made FINAL.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 1, 2, 3, and 5 in Figure 1. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are

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required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following must be shown or the feature(s) canceled from the claim(s): a pressing-on device (claim 5); fingers equipped with heating wire (claims 6 and 7); high-frequency or ultrasonic welding units (claim 8); laser welding units (claim 9); heated metal straps, metal elements, or heating cartridges (claim 10); hot air welding units (claim 11); induction welding units (claim 12); friction welding units (claim 13); and slide elements (claim 14). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to because Figures 6, 7, and 8 lack reference numbers. In addition, it is unclear what the darkened regions on the left side of the finger comb structures represent (see Figures 4, 6, and 7). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

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Specification

5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required, as these features are absent from the specification and drawings: a pressing-on device (claim 5); fingers equipped with heating wire (claims 6 and 7); high-frequency or ultrasonic welding units (claim 8); laser welding units (claim 9); heated metal straps, metal elements, or heating cartridges (claim 10); hot air welding units (claim 11); induction welding units (claim 12); friction welding units (claim 13); and slide elements (claim 14).

6. The disclosure is objected to because of the following informalities: it is unclear what structure is meant by "slides 8" on page 8, 2nd line of the specification. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 5-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to

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which it pertains, or with which it is most nearly connected, to make and/or use the invention.

With regard to claim 5, the "pressing-on device" (between the finger and the welding section) is not disclosed in the specification or drawings, and the function of this device is also not clear, such that the device is not adequately disclosed to enable its use and production of the final honeycomb structure of the geometry as set forth in the first 5 lines of claim 5.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 5-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claim 5, it is unclear how the actual "welding" process would take place via the comb-like finger system, as none of the types of welding devices (in claims 8-13) are disclosed in the specification or drawings. Also in claim 5, it is unclear what the phrase "the welding sections being laterally displaced by two sections". What structures represent these "two sections"?

With regard to claim 14, it is unclear what the "slide elements" represent in view of performing a "feed motion" after the finger systems move into the "completely welded honeycomb".

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Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. Claims 5-14 insofar as definite are rejected under 35 U.S.C. 103(a) as being unpatentable over Kehl et al. (DE 197 03 961) in view of Johnson (US 5,437,936).

Kehl et al. disclose a honeycomb structure having a plurality of material strips having a corrugated shape with U-shaped cross-section and horizontal and vertical parts, in which the layers of strips are to be joined together by welding (abstract; and Figures 1 and 2). The honeycomb structure is produced by an apparatus having welding equipment and guide means for arranging the layers that are used in the production of the honeycomb, in which the apparatus includes the following features: a welding head 22 (of which any type of welding would be applied by one of ordinary skill in the art, including ultrasonic, laser, induction, friction welding etc.), in which the

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welding head has spaced projections 24 (fingers) having vertical and horizontal walls (25,26), heating wires 31 at the corner of each projection 24, a comb-like welding anvil 32 having a connecting bridge 33 and holding (positioning, guiding, and sliding) fingers 34 to allow for horizontal movement of bridge 33 while welding head 22 moves vertically, to effect forming of the honeycomb wave profiles and welding at the corners (abstract; and Figures 1-3). Kehl et al. do not specifically disclose a pressing-on device to press the material strips together.

However, Johnson discloses honeycomb core structures and an apparatus for making honeycomb structures, in which a plurality of superimposed metallic strips are inserted into a laser welding device (Figures 5 and 6) having pressure applying means (compression means 200) to press together the superimposed sheets or strips where a laser beam pattern is to be created by laser welding device (170,180,190,192), such that the apparatus is advantageous for eliminating the necessity (additional step) for preforming the metallic foil into corrugated strips or sheets (abstract; column 2, lines 51-68; column 3, lines 1-36; column 4, lines 5-23; column 7, lines 28-68; column 8, lines 1-41; and Figures 1-6).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the welding apparatus for producing a honeycomb structure, as disclosed by Kehl et al., by adding the pressure applying means on the laser welding device to produce honeycomb structures, as taught by Johnson, in order to eliminate the necessity (additional step) for preforming the metallic

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foil into corrugated strips or sheets (Johnson; column 2, lines 56-59; and column 3, lines 33-36).

Conclusion

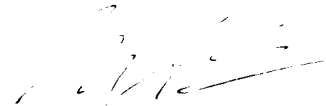
14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Minamida et al., FR 1 518 581, and GB 1 381 670 references are also cited to show related art.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin P. Kerns whose telephone number is (703) 305-3472. The examiner can normally be reached on Monday-Friday from 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (703) 308-3318. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7718 for regular communications and (703) 305-6078 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

kpk
May 18, 2003


M. ALEXANDRA ELV
PRIMARY EXAMINER